**Bossier Parish Community College**
**Master Syllabus**

**Course Prefix and Number:** BLGY 225L **Credit Hours:** 1

**Course Title:** Human Physiology Laboratory

**Course Prerequisites:** Registration in or credit for BLGY225 or equivalent

**Textbook:** Fox, S.I.; Laboratory Guide, Human Physiology, Concepts and Clinical Applications, 10th edition

**Course Description:**
Laboratory exercises, including use of laboratory equipment, to reinforce lecture. Emphasis is placed on critical thinking and application through the use of case studies.

**Learning Outcomes**

At the end of the course, the student will

A. demonstrate the ability to comprehend and implement standard precautions and safety practices in the physiology laboratory;
B. utilize laboratory equipment and supplies to perform specified laboratory procedures, collect, analyze, and interpret results with respect to normal physiological values; and
C. demonstrate the ability to locate and apply information and critical thinking skills to analyze and solve problems involving functions of the human body.

To achieve the learning outcomes, the student will

1. practice safety and standard precautions in the laboratory. (A)
2. convert units of measure in the metric system. (B)
3. identify the major parts of a microscope, demonstrate proper technique in the care and handling of this instrument, and estimate the size of microscopic objects. (B)
4. examine, draw, and measure cells using the light microscope. (B)
5. explain how cell size influences the rate of diffusion, and relate this information to the circulatory system. (B)
6. describe the processes of mitosis and meiosis. (B)
7. perform experiments to demonstrate homeostasis. (B)
8. perform experimentation to determine the cellular effects of tonicity on diffusion and osmosis. (B)
9. review tissues of the endocrine system and correlate with their hormone production and negative feedback. (B)
10. complete assigned interactive exercises on muscle physiology.(B, C)
11. perform electrocardiogram. (B)
12. analyze an electrocardiogram to identify normal and abnormal features and relate abnormal features to pathophysiology. (B)

13. demonstrate the ability to take blood pressure measurements and analyze and interpret the results. (B)
14. complete assigned interactive exercises on cardiovascular physiology (B, C)
15. perform and analyze a complete blood count and calculate red blood cell indices . (B)
16. relate results of the complete blood count and red blood cell indices to normal values and pathophysiology. (B)
17. complete assigned interactive exercises on pulmonary physiology and relate results to normal values and pathophysiology. (B,C)
18. perform clinical urinalysis and relate results to normal and abnormal kidney function. (B)
19. complete assigned laboratory reports and case studies(A,B, C)

**Course Requirements**

- minimum 60% on laboratory safety quiz
- demonstrate laboratory safety and standard precautions
- minimum average 60% on case studies and lab quizzes.

**Course Grading Scale:**

A- 90% or more of total possible points and a minimum 60% on laboratory safety quiz and a minimum average of 60% on case studies and lab quizzes.

B- 80% or more of total possible points and a minimum 60% on laboratory safety quiz and a minimum average of 60% on case studies and lab quizzes.

C- 70% or more of total possible points and a minimum 60% on laboratory safety quiz and a minimum average of 60% on case studies and lab quizzes.

D- 60% or more of total possible points and a minimum 60% on laboratory safety quiz and a minimum average of 60% on case studies and lab quizzes.

F- less than 60% of total possible points or less than 60% on laboratory safety quiz or less than 60% average on case studies and lab quizzes.

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